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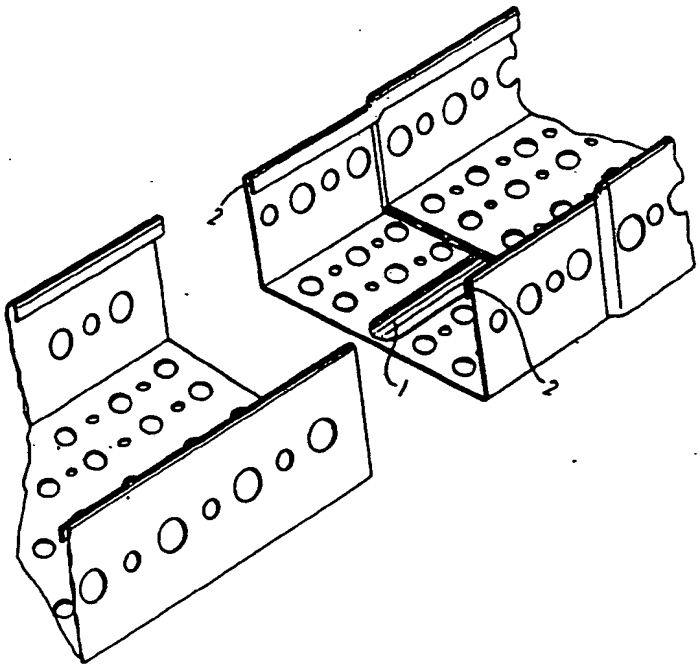

(57) Abstract

A tray for cables formed as a quadrangular channel upwardly open and doubled over at its free longitudinal edges includes at its one end a section with reduced dimensions in relation to the remainder of the tray.

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Tray for cables and a method of the manufacturing thereof.

The invention relates to a tray for cables formed as a quadrangular channel upwardly open and folded down at its free longitudinal edges and which at its one end has a section with reduced dimensions in relation to the remainder of the tray.

Trays for cables which by means of supporting brackets are secured to walls and serve to receive cables are manufactured in specific lengths and subsequently assembled into larger lengths on site of use.

Various supporting brackets or fixtures are used for the assembling and some of them necessitate using screws and corresponding tools while other brackets are mounted in some other way, but to all of them it applies that they must be available, i.e. manufactured, and that it takes time to mount them. Moreover, at least two brackets are required for each assembling. This is actually an expensive and time-consuming measure.

GB patent No. 1 322 940 deals with tray members for cables of the above mentioned type in which the individual tray members in the longitudinal direction have gradually decreasing dimensions so that the members may be assembled without the use of tools in that they are made to telescope, but it is a drawback that this manner does not provide for any gradual and smooth transition between the individual lengths of cable trays. Due to the gradually decreasing dimensions throughout the length, the prior tray members for cables are, moreover, complicated to manufacture and a manufacturing by sectional rolling that is the most economic method of manufacturing is not possible. It is a further complication in the manufacturing of the known tray for cables that the end section with reduced

dimensions is obtained in that the free longitudinal edges are doubled over and at said end sections are squeezed further together so as to provide a shoulder serving as a stop.

It is an object of the invention to provide a tray for cables designed in such a manner that the individual lengths of cable trays as offered on large-scale production may be adjoined straight away without the use of tools, screws or supporting brackets.

To obtain this, the tray for cables according to the invention is characterized in that said remaining part of the tray has constant dimensions and that a bulb is provided at the bottom of the tray.

Said design allows for adjoining the individual lengths of cable trays in an extremely simple manner, i.e. as in the above mentioned prior structure purely in that an end of a cable tray with reduced dimensions is pushed into an end of a cable tray with unchanged dimensions, actually in the same manner as tube pieces for a vacuum cleaner stick. Due to the fact that it is only an end section of the individual tray members that has reduced dimensions there are obtained quite gradual and smooth transitions at the joints. Moreover, the members are easily disassembled because there is no keying effect as may be expected from the structure disclosed in the above mentioned GB reference No. 1 322 940 owing to the conicity thereof. The bulb at the bottom of the tray allows for producing the tray by sectional steel rolling which is a substantially more economic method of manufacturing than turning-down or doubling-over which is required in the production of the above recited prior tray for cables.

Owing to the channel-shape, it is actually very difficult to impart to the one end of a cable tray of the type concerned the necessary decreasing dimensions. In a general press process that may be used

for forming a tubular piece for a vacuum cleaner because it is circular, the sheet material of a cable tray will simply bulge out due to the open quadrangular channel-shape. The material is virtually unable to be upset.

In view of the above the invention also relates to a method of manufacturing the tray for cables in which a reduction is effected of the external dimensions of the one end of an open channel-shaped profile with doubled-over free longitudinal edges which by the reduction of dimensions at one end are further turned down against the profile bottom and inwardly against the lateral walls of the profile and in which the lateral walls according to the invention at said one end are sugeezed together, at the same time there being provided a bulb at the bottom of the profile.

Due to the bulb at the profile bottom and the turning-down of the foldings at the lateral walls of the profile an extra consumption of material is caused, aiming solely at obviating the above mentioned bulging of the sheet material.

The invention will now be explained in detail with reference to the drawing illustrating two end sections of a tray for cables.

The figure illustrates on the right side thereof the end of the cable tray with reduced dimensions. The bulb at the tray bottom is designated 1 and 2 designates the bendings turned further down and against the lateral walls of the tray which thus become a little lower. By the assembling with the tray illustrated on the left in the figure the foldings may then be inserted into the corresponding, but undeformed bendings of this tray.

The extent of the reduction of dimensions is not particularly critical but it is most advantageous if the reduction corresponds as exactly as possible to the

sheet thickness so as to obtain a reasonably tight fitting and thus a stable assembling.

The reduction proper of the dimensions may be effected by punching and it is necessary that the folding-down of the lateral edges 2, the pressing-in of the lateral walls and the pressing-up of bulb 1 are carried out in unison.

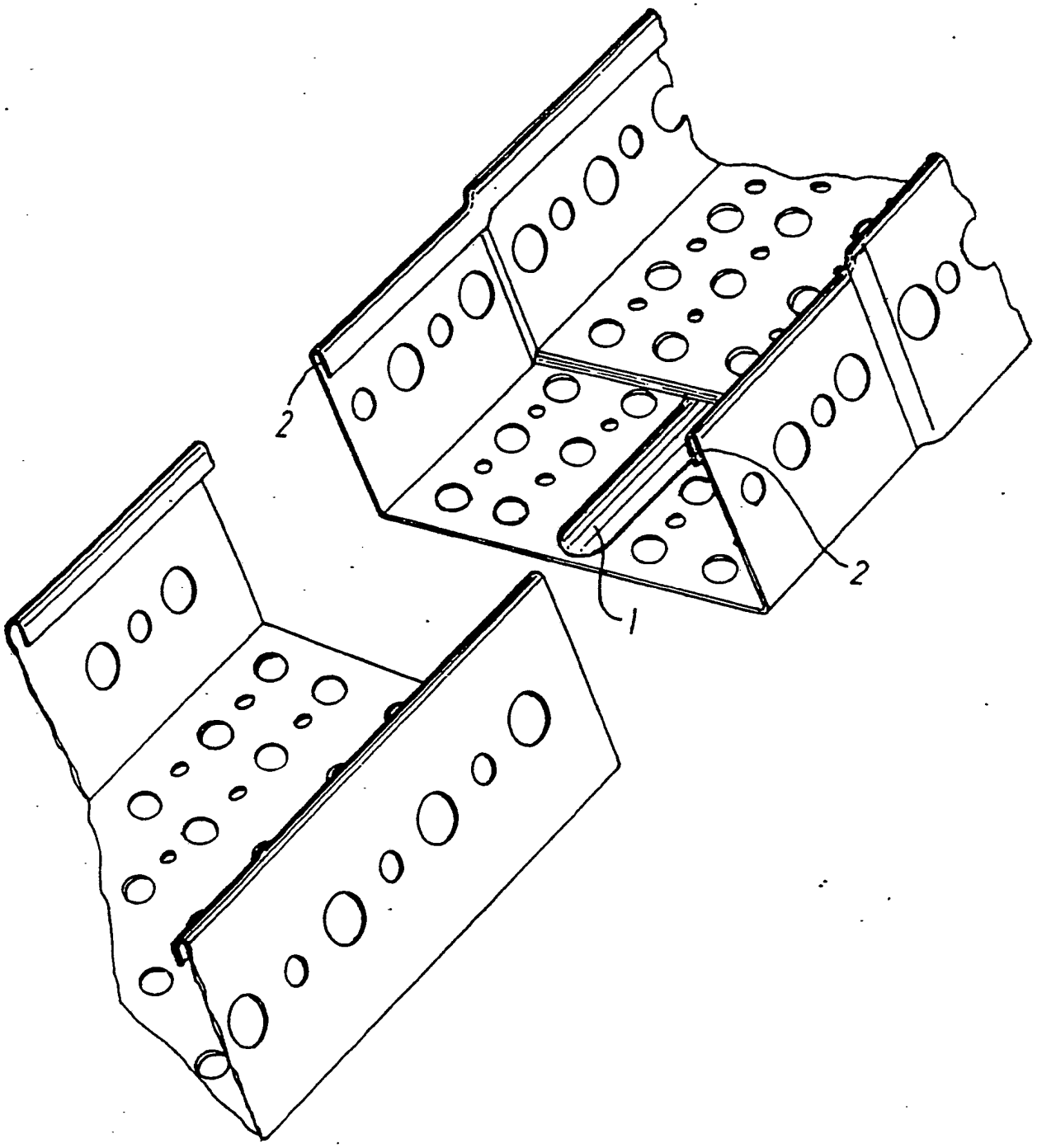
If it is desired to avoid waste because the cable trays do not always fit when having the size offered by the manufacturer and frequently have to be cut, two or more pieces of cable tray without any end sections with reduced dimensions may be united into larger lengths by means of a joining strap having reduced dimensions at both ends or being reduced throughout its length and then further comprising a central stop and which is inserted into the end portions of two cut pieces of cable tray having the large dimensions.

P A T E N T C L A I M S

1. A tray for cables formed as a quadrangular channel upwardly open and folded down at its free longitudinal edges and which at its one end has a section with reduced dimensions in relation to the remainder of the tray, characterized in that said remaining part of the tray has constant dimensions and that a bulb is provided at the bottom of the tray.

2. A tray for cables as claimed in claim 1, characterized in that the reduction of dimensions corresponds to the thickness of the sheet material from which the tray is manufactured.

3. A method of manufacturing the tray for cables as claimed in claim 1 or 2, in which a reduction is effected of the external dimensions of the one end of an open channel-shaped profile with doubled-over free longitudinal edges which by the reduction of dimensions at the one end are further turned down, characterized in that the lateral walls at said one end are suqeezed towards each other and that a bulb is simultaneously provided at the bottom of the profile.



INTERNATIONAL SEARCH REPORT

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According to International Patent Classification (IPC) or to both National Classification and IPC [4]

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II. FIELDS SEARCHED

Minimum Documentation Searched [7]	
Classification System	Classification Symbols
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Nat Cl	21c:18/01, 19/05
US Cl	174:48, 68

Documentation Searched other than Minimum Documentation to the Extent that such Documents are included in the Fields Searched [8]

SE, NO, DK, FI classes as above

III. DOCUMENTS CONSIDERED TO BE RELEVANT [9]

Category [10]	Citation of Document, [11] with indication, where appropriate, of the relevant passages [12]	Relevant to Claim No. [13]
A	GB, A, 1 322 940 (SWIFTS OF SCARBOROUGH) 11 July 1973	1-3
A	EP, A2, 0 057 879 (RIEPE, HANS) 18 August 1982	1-3

[10] Special categories of cited documents:

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IV. CERTIFICATION

Date of the Actual Completion of the International Search	Date of Mailing of this International Search Report
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Swedish Patent Office	Magnus Westöö